REMARKS

The following is intended as a full and complete response to the Final Office Action mailed on May 20, 2004. Claims 26-28, 31-33 and 36-39 were examined. The Examiner rejected claims 26-28 and 31-33 under 35 U.S.C. § 103(a) as obvious in view of Lalvani in combination with Stam.

Rejections under 35 U.S.C. § 103(a)

In paragraph 5 of the Office Action, the Examiner rejected claim 26 as being obvious in view of the families of non-periodic space structure configurations described in U.S. Patent No. 5,575,125 to Lalvani in combination with the aperiodic texture mapping algorithm described on pages 1-9 of a paper authored by Jos Stam, "Aperiodic Texture mapping," ERCIM, July 1996-March 1997. Applicant respectfully traverses.

Pending claim 26 recites the limitation of generating a textured tile by placing an aperiodic tile on a textured image area and then mapping the aperiodic tile onto the textured image area. As persons skilled in the art understand, a result of this mapping step is that texture information is transferred from the textured image area to the aperiodic tile, thereby creating an aperiodic textured tile that contains the texture information from the textured image area. Stam does not teach generating textured tiles in the same manner as claim 26.

Section 3 of Stam explains the process of creating a "homogenous texture tiles" (which are similar to the textured tiles of claim 26). Specifically, Stam teaches that a homogenous texture tile is created by taking a color tile and applying a noise function at a specific point, (i,j), in that color tile to generate the texture at that point (i.e., to generate a texel). The noise function is applied to each point in the color tile to generate the texture information for the entire tile,

thereby creating the homogeneous texture tile. See Stam at 3 ("[t]he value of the texture at a point (i,j) is obtained through an arbitrary function which depends only on the (2K+1)x(2K+1) points in the noise centered at (i,j), with K<N/2"). Nowhere does Stam talk about texture information being transferred to an aperiodic tile by mapping the aperiodic tile onto a textured image area, thereby generating an aperiodic textured tile.

Persons skilled in the art will recognize that the mapping step recited in claim 26 is wholly different than the process of applying a noise function to the different points of a color tile disclosed to generate texels as described in Stam. Importantly, the mapping step of claim 26 is a non-computational step, consisting of a simple transfer of texture information from an textured image area to an aperiodic tile. By contrast, the texel generation process set forth in Stam requires a specific computation of texture information at each point (i,j) of a tile. Another distinction is that the textured tiles of claim 26 may be generated from any arbitrary texture map. The homogenous texture tiles of Stam are not generated from an arbitrary texture map. Rather, they are generated using one of six color tiles to which a noise function is applied.

Similarly to Stam, Lalvani fails to teach the step of generating a textured tile by placing an aperiodic tile on a textured image area and then mapping the aperiodic tile onto the textured image area. In fact, the Examiner stated this to be the case in the Final Office Action. See Final Office Action at p. 3 ("[h]owever, it is noted that Lalvani fails to disclose . . . generating texture tiles by mapping said aperiodic tile set onto said textured image area").

Based on the foregoing, Applicant respectfully submits that Stam and/or Lalvani, either alone or in combination, fail to teach or suggest each and every limitation in pending claim 26 and therefore cannot be used to render claim 26 obvious. For this reason, Applicant believes that claim 26 is in condition for allowance and requests withdrawal of the § 103(a) rejection of this

claim. Further, since claims 27-28 and 36-37 depend from allowable claim 26, Applicant submits that these claims also are in condition for allowance.

Pending claim 31 recites the same limitations as pending claim 26. For at least the same reasons as those set forth above with respect to claim 26, Applicant respectfully submits that claim 31 is in condition for allowance and requests withdrawal of the § 103(a) rejection of this claim. Further, since claims 32-33 and 38-39 depend from allowable claim 31, Applicant submits that these claims also are in condition for allowance.

In addition to the foregoing arguments, Applicant submits that Lalvani does not constitute analogous prior art and therefore should not have been relied upon by the Examiner. Importantly, the invention taught in Lalvani relates to modular building systems in the fields of "architecture and building technology, both on earth and in outer space." See Lalvani col. 1, lines 24-26. Lalvani also specifies the uses of his disclosed invention. Id. at col. 1, lines 53-59 ("This patent focuses mainly on various shapes of tiles and the tiling configurations generated by using these tiles. The tiles can be converted to upright or inclined prisms of any height. Such prisms provide alternative blocks and bricks for physical environments, architecture, art and sculpture objects, toys, games and puzzles."). As the foregoing illustrates, Lalvani is in a completely different field of endeavor than computer graphics, which is the subject matter of Applicant's invention. Further, the teachings of Lalvani are irrelevant to the problem solved by Applicant's invention. Lalvani teaches certain shapes and both periodic and non-periodic configurations of tiles based on p-sided prismatic nodes that provide designers with greater versatility in designing structures and objects in "physical environments." By contrast, Applicant's invention provides a way of texturing a graphics object with aperiodic tiles to prevent displacements from forming on the graphics object as occurs with conventional texture tiling techniques. For these reasons, namely that both the structure and the function of
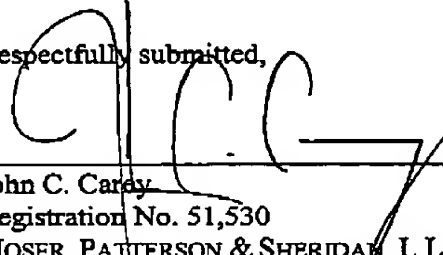
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Applicant's invention are clearly different than the structure and function of the subject matter disclosed in Lalvani, Applicant contends that the Examiner has erroneously relied on nonanalogous art in rejected the pending claims under § 103(a).

Conclusion

Based on the above remarks, Applicant believes that he has overcome all of the rejections set forth in the Final Office Action mailed May 20, 2004 and that the pending claims are in condition for allowance. If the Examiner has any questions, please contact the Applicant's undersigned representative at the number provided below.

Respectfully submitted,

John C. Carey
Registration No. 51,530
MOSER, PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd., Suite 1500
Houston, Texas 77056-6582
Telephone: (650) 330-2310
Facsimile: (650) 330-2314

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